

CLAIMS

1. A ventilation device (100, 200, 300, 400) comprising a fan (110, 210, 310, 410) capable of being
5 driven rotationally by an open electric motor (120, 220, 320, 420) which is firmly attached to a support (130, 230, 330, 430) intended for fixing said ventilation device (100, 200, 300, 400), the fan (110, 210, 310, 410) consisting of a plurality of blades
10 (111, 211, 311, 411) which are distributed regularly around a bowl (112, 212, 312, 412) inside which there are arranged internal ribs (113, 213, 313, 413) capable of ventilating said open electric motor (120, 220, 320, 420), characterised in that the support (130, 230, 330, 430) comprises a central part (131, 231, 331, 431)
15 which is connected in a substantially sealed manner to at least one peripheral portion of the open electric motor (120, 220, 320, 420).
- 20 2. A ventilation device (100, 200, 300) according to Claim 1, characterised in that the central part (131, 231, 331) of the support (130, 230, 330) comprises a through hole (132, 232, 332), the cross-section of which is substantially complementary to that of the
25 open electric motor (120, 220, 320), said through hole (132, 232, 332) being intended to receive said open electric motor (120, 220, 320).
- 30 3. A ventilation device (100, 200, 300) according to Claim 2, characterised in that the through hole (132, 232, 332) is delimited by an inner edge (133, 233, 333) which cooperates by continuous contiguous contact with

a portion of the peripheral surface of the open electric motor (120, 220, 320).

4. A ventilation device (100, 200) according to Claim 5 3, characterised in that the inner edge (133, 233) cooperates by continuous contiguous contact with the lateral wall (122, 222) of the open electric motor (120, 220).

10 5. A ventilation device (300) according to Claim 3, characterised in that the inner edge (333) cooperates by continuous contiguous contact with a peripheral portion of the rear part (323) of the electric motor (320).

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6. A ventilation device (400) according to Claim 1, characterised in that the central part (431) of the support (430) comprises a blind hole (432) which is capable of at least partially receiving the open 20 electric motor (420), the bottom (438) of said blind hole (432) extending substantially opposite the rear part of said open electric motor (420).

7. A ventilation device (400) according to Claim 6, 25 characterised in that the bottom (438) of the blind hole (432) is firmly attached to the rear part of the open electric motor (420).

8. A ventilation device (400) according to one of 30 Claims 6 or 7, characterised in that the bottom (438) of the blind hole (432) is capable of constituting the rear part, forming a plate, of the open electric motor (420).

9. A ventilation device (100, 200, 300) according to any one of Claims 1 to 8, characterised in that the central part (131, 231, 331) of the support (130, 230, 330) is capable of holding the electric motor (120, 220, 320) by clipping.

10. A ventilation device (100, 200, 300) according to any one of Claims 1 to 9, characterised in that the central part (131, 231, 331) of the support (130, 230, 330) is capable of holding the electric motor (120, 220, 320) by tight fitting.

11. A ventilation device (100) according to any one of Claims 1 to 10, characterised in that the central part (131) comprises a so-called active surface (134), which is positioned opposite the bottom (114) of the bowl (112) and which has a concave shape capable of facilitating the flow of the air from the inside to the outside of said bowl (112).

12. A ventilation device (100) according to Claim 11, characterised in that the active surface (134) of the central part (131) has a cross-section in the shape of a quarter of a circle whose two ends extend respectively substantially axially at the inner edge (133) of the central part (131), and substantially transversally at the outer edge (135) of said central part (131).

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13. A ventilation device (200) according to any one of Claims 1 to 10, characterised in that the central part (231) comprises a so-called active surface (234), which

is positioned opposite the bottom (214) of the bowl (212) and which has a substantially flat shape extending substantially linearly.

5 14. A ventilation device (300, 400) according to any one of Claims 1 to 10, characterised in that the central part (331, 431) comprises a so-called active surface (334, 434), which is positioned opposite the bottom (314, 414) of the bowl (312, 412) and which
10 extends discontinuously.

15 15. A ventilation device (100, 200, 300, 400) according to any one of Claims 1 to 14, characterised in that the central part (131, 231, 331, 431) has an annular shape, the outer edge (135, 235, 335, 435) of which extends substantially opposite that of the bowl (112, 212, 312, 412), and the inner edge (133, 233, 333, 433) of which delimits a hole (132, 232, 332, 432) of circular cross-section.

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16. A ventilation device (100, 200, 300, 400) according to any one of Claims 1 to 15, characterised in that the support (130, 230, 330, 430) also comprises a peripheral part (136, 236, 336, 436), forming a
25 frame, which is connected to the central part (131, 231, 331, 431) by at least one support arm (137, 237, 337, 437).

17. An engine cooling device, characterised in that it
30 comprises at least one ventilation device (100, 200, 300, 400) according to any one of the preceding claims.

18. A motor vehicle, characterised in that it comprises at least one ventilation device (100, 200, 300, 400) according to any one of Claims 1 to 16.